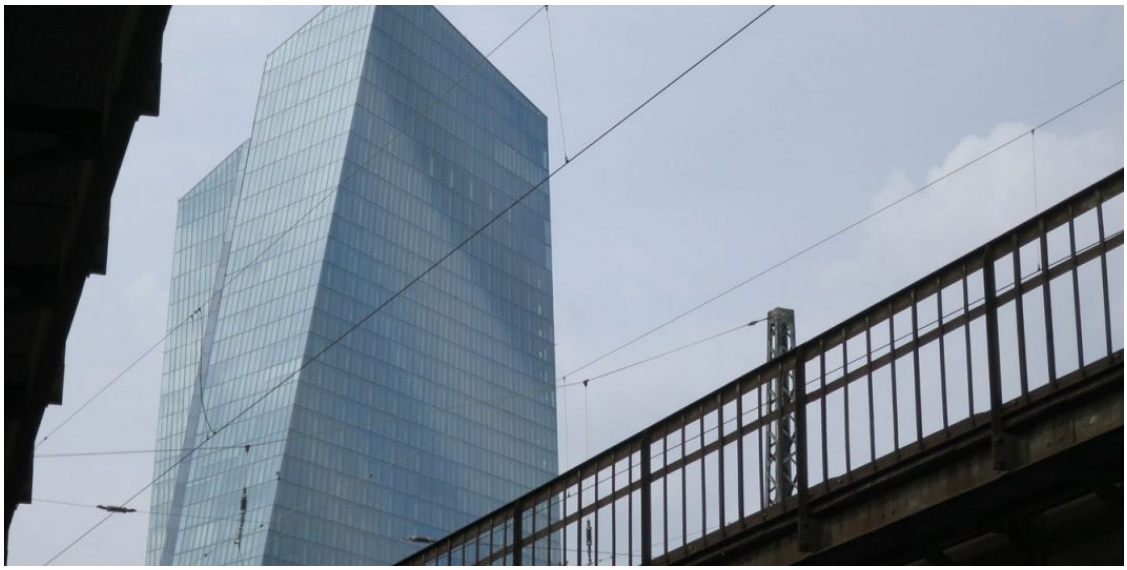

ALTEXPLOIT 2018-10-02

THE BANKING BUSINESS

ECONOFICTION BALANCE SHEET, FINANCE, KREDITSCHÖPFUNG, PRIVATE BANK

Why is lending indispensable to banking? This not-so new question has garnered a lot of steam, especially in the wake of 2007-08 crisis. In India, however, this question has become quite a staple of CSOs purportedly carrying out research and analysis in what has, albeit wrongly, begun to be considered offshoots of neoliberal policies of capitalism favoring cronyism on one hand, and marginalizing priority sector focus by nationalized banks on the other. Though, it is a bit far-fetched to call this analysis mushrooming on artificially-tilled grounds, it nevertheless isn't justified for the leaps such analyses assume don't exist. The purpose of this piece is precisely to demystify and be a correctional to such erroneous thoughts feeding activism.

The idea is to launch from the importance of lending practices to banking, and why if such practices weren't the norm, banking as a business would falter. Monetary and financial systems are creations of double entry-accounting, in that, when banks lend, the process is a creation of a matrix/(ces) of new assets and new liabilities. Monetary system is a counterfactual, which is a bookkeeping mechanism for the intermediation of real economic activity giving a semblance of reality to finance capitalism in substance and form. Let us say, a bank A lends to a borrower. By this process, a new asset and a new liability is created for A, in that, there is a debit under bank assets, and a simultaneous credit on the borrower's account. These accounting entries enhance bank's and borrower's respective categories, making it operationally different from opening bank accounts marked by deposits. The bank now has an asset equal to the amount of the loan and a liability equal to the deposit. Put a bit more differently, bank A writes a cheque or draft for the borrower, thus debiting the borrower's loan account and crediting a payment liability account. Now, this borrower decides to deposit this cheque/draft at a different bank B, which sees the balance sheet of B grow by the same amount, with a payment due asset and a deposit liability. This is what is a bit complicated and referred to as matrix/(ces) at the beginning of this paragraph. The obvious complication is due to a duplication of balance sheet across the banks A and B, which clearly stands in need of urgent resolution. This duplication is categorized under the accounting principle of 'Float', and is the primary requisite for resolving duplicity. Float is the amount of time it takes for money to move from one account to another. The time period is significant because it's as if the funds are in two places at once. The money is still in the cheque writer's account, and the cheque recipient may have deposited funds to their bank as well. The resolution is reached when the bank B clears the cheque/draft and receives a reserve balance credit in exchange, at which point the bank A sheds both reserve balances and its payment liability. Now, what has happened is that the systemic balance sheet has grown by the amount of the

original loan and deposit, even if these are domiciles in two different banks A and B. In other words, B's balance sheet has an increased deposits and reserves, while A's balance sheet temporarily unchanged due to loan issued offset reserves decline. It needs to be noted that here a reserve requirement is created in addition to a capital requirement, the former with the creation of a deposit, while the latter with the creation of a loan, implying that loans create capital requirement, whereas deposits create reserve requirement. *Pari Passu*, bank A will seek to borrow new funding from money markets and bank B could lend funds into these markets. This is a natural reaction to the fluctuating reserve distribution created at banks A and B. This course of normalization of reserve fluctuations is a basic function of commercial bank reserve management. Though, this is a typical case involving just two banks, a meshwork of different banks, their counterparties, are involved in such transactions that define present-day banking scenario, thus highlighting complexity referred to earlier.

Now, there is something called the Cash Reserve Ratio (CRR), whereby banks in India (and elsewhere as well) are required to hold a certain proportion of their deposits in the form of cash. However, these banks don't hold these as cash with themselves for they deposit such cash (also known as currency chests) with the Reserve Bank of India (RBI). For example, if the bank's deposits increase by Rs. 100, and if the CRR is 4% (this is the present CRR stipulated by the RBI), then the banks will have to hold Rs. 4 with the RBI, and the bank will be able to use only Rs. 96 for investments and lending, or credit purpose. Therefore, higher the CRR, lower is the amount that banks will be able to use for lending and investment. CRR is a tool used by the RBI to control liquidity in the banking system. Now, if the bank A lends out Rs. 100, it incurs a reserve requirement of Rs. 4, or in other words, for every Rs. 100 loan, there is a simultaneous reserve requirement of Rs. 4 created in the form of reserve liability. But, there is a further ingredient to this banking complexity in the form of Tier-1 and Tier-2 capital as laid down by BASEL Accords, to which India is a signatory. Under the accord, bank's capital consists of tier-1 and tier-2 capital, where tier-1 is bank's core capital, while tier-2 is supplementary, and the sum of these two is bank's total capital. This is a crucial component and is considered highly significant by regulators (like the RBI, for instance), for the capital ratio is used to determine and rank bank's capital adequacy. tier-1 capital consists of shareholders' equity and retained earnings, and gives a measure of when the bank must absorb losses without ceasing business operations. BASEL-3 has capped the minimum tier-1 capital ratio at 6%, which is calculated by dividing bank's tier-1 capital by its total risk-based assets. Tier-2 capital includes revaluation reserves, hybrid capital instruments and subordinated term debt, general loan-loss revenues, and undisclosed reserves. tier-2 capital is supplementary since it is less reliable than tier-1 capital. According to BASEL-3, the minimum total capital ratio is 8%, which indicates the minimum tier-2 capital ratio at 2%, as opposed to 6% for the tier-1 capital ratio. Going by these norms, a well capitalized bank in India must have a 8% combined tier-1 and tier-2 capital ratio, meaning that for every Rs. 100 bank loan, a simultaneous regulatory capital liability of Rs. 8 of tier-1/tier-2 is generated. Further, if a Rs. 100 loan has created a Rs. 100 deposit, it has actually created an asset of Rs. 100 for the bank, while at the same time a liability of Rs. 112, which is the sum of deposits and required reserves and capital. On the face of it, this looks like a losing deal for the bank. But, there is more than meets the eye here.

Assume bank A lends Mr. Amit Modi Rs. 100, by crediting Mr. Modi's deposit account held at A with Rs. 100. Two new liabilities are immediately created that need urgent addressing, viz. reserve and capital requirement. One way to raise Rs. 8 of required capital, bank A sells shares, or raise equity-like debt or retain earnings. The other way is to attach an origination fee of 10% (sorry for the excessively high figure here, but for sake of brevity, let's keep it at 10%). This 10% origination fee helps maintain retained earnings and assist satisfying capital requirements. Now, what is happening here might look unique, but is the key to any banking business of lending, i.e. the bank A is meeting its capital requirement by discounting a deposit it created of its own loan, and thereby reducing its liability without actually reducing its asset. To put it differently, bank A extracts a 10% fee from Rs. 100 it loans, thus depositing an actual sum of only Rs. 90. With this, A's reserve requirement decrease by Rs. 3.6 (remember 4% is the CRR). This in turn means that the loan of Rs. 100 made by A actually creates liabilities worth Rs. Rs. 108.4 (4-3.6 = 0.4 + 8). The RBI, which imposes the reserve requirement will follow up new deposit creation with a systemic injection sufficient to accommodate the requirement of bank B that has issued the deposit. And this new requirement is what is termed the targeted asset for the bank. It will fund this asset in the normal course of its asset-liability management process, just as it would any other asset. At the margin, the bank actually has to compete for funding that will draw new reserve balances into its position with the RBI. This action of course is commingled with numerous other such transactions that occur in the normal course of reserve management. The sequence includes a time lag between the creation of the deposit and the activation of the corresponding reserve requirement against that deposit. A bank in theory can temporarily be at rest in terms of balance sheet growth, and still be experiencing continuous shifting in the mix of asset and liability types, including shifting of deposits. Part of this deposit shifting is inherent in a private sector banking system that fosters competition for deposit funding. The birth of a demand deposit in particular is separate from retaining it through competition. Moreover, the fork in the road that was taken in order to construct a private sector banking system implies that the RBI is not a mere slush fund that provides unlimited funding to the banking system.

The originating accounting entries in the above case are simple, a loan asset and a deposit liability. But this is only the start of the story. Commercial bank 'asset-liability management' functions oversee the comprehensive flow of funds in and out of individual banks. They control exposure to the basic banking risks of liquidity and interest rate sensitivity. Somewhat separately, but still connected within an overarching risk management framework, banks manage credit risk by linking line lending functions directly to the process of internal risk assessment and capital allocation. Banks require capital, especially equity capital, to take risk, and to take credit risk in particular. Interest rate risk and interest margin management are critical aspects of bank asset-liability management. The asset-liability management function provides pricing guidance for deposit products and related funding costs for lending operations. This function helps coordinate the operations of the left and the right hand sides of the balance sheet. For

example, a central bank interest rate change becomes a cost of funds signal that transmits to commercial bank balance sheets as a marginal pricing influence. The asset-liability management function is the commercial bank coordination function for this transmission process, as the pricing signal ripples out to various balance sheet categories. Loan and deposit pricing is directly affected because the cost of funds that anchors all pricing in finance has been changed. In other cases, a change in the term structure of market interest rates requires similar coordination of commercial bank pricing implications. And this reset in pricing has implications for commercial bank approaches to strategies and targets for the compositional mix of assets and liabilities. The life of deposits is more dynamic than their birth or death. Deposits move around the banking system as banks compete to retain or attract them. Deposits also change form. Demand deposits can convert to term deposits, as banks seek a supply of longer duration funding for asset-liability matching purposes. And they can convert to new debt or equity securities issued by a particular bank, as buyers of these instruments draw down their deposits to pay for them. All of these changes happen across different banks, which can lead to temporary imbalances in the nominal matching of assets and liabilities, which in turn requires active management of the reserve account level, with appropriate liquidity management responses through money market operations in the short term, or longer term strategic adjustment in approaches to loan and deposit market share. The key idea here is that banks compete for deposits that currently exist in the system, including deposits that can be withdrawn on demand, or at maturity in the case of term deposits. And this competition extends more comprehensively to other liability forms such as debt, as well as to the asset side of the balance sheet through market share strategies for various lending categories. All of this balance sheet flux occurs across different banks, and requires that individual banks actively manage their balance sheets to ensure that assets are appropriately and efficiently funded with liabilities and equity. The ultimate purpose of reserve management is not reserve positioning *per se*. The end goal is balance sheets are in balance. The reserve system records the effect of this balance sheet activity. And even if loan books remain temporarily unchanged, all manner of other banking system assets and liabilities may be in motion. This includes securities portfolios, deposits, debt liabilities, and the status of the common equity and retained earnings account. And of course, loan books don't remain unchanged for very long, in which case the loan/deposit growth dynamic comes directly into play on a recurring basis.

Commercial banks' ability to create money is constrained by capital. When a bank creates a new loan, with an associated new deposit, the bank's balance sheet size increases, and the proportion of the balance sheet that is made up of equity (shareholders' funds, as opposed to customer deposits, which are debt, not equity) decreases. If the bank lends so much that its equity slice approaches zero, as happened in some banks prior to the financial crisis, even a very small fall in asset prices is enough to render it insolvent. Regulatory capital requirements are intended to ensure that banks never reach such a fragile position. In contrast, central banks' ability to create money is constrained by the willingness of their government to back them, and the ability of that government to tax the population. In practice, most central bank money these days is asset-backed, since central banks create new money when they buy assets in open market operations or ***Quantitative Easing***, and when they lend to banks. However, in theory a central bank could literally spirit money from thin air without asset purchases or lending to banks. This is Milton Friedman's famous ***helicopter drop***. The central bank would become technically insolvent as a result, but provided the government is able to tax the population, that wouldn't matter. The ability of the government to tax the population depends on the credibility of the government and the productive capacity of the economy. Hyperinflation can occur when the supply side of the economy collapses, rendering the population unable and/or unwilling to pay taxes. It can also occur when people distrust a government and its central bank so much that they refuse to use the currency that the central bank creates. Distrust can come about because people think the government is corrupt and/or irresponsible, or because they think that the government is going to fall and the money it creates will become worthless. But nowhere in the genesis of hyperinflation does central bank insolvency feature.

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